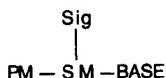


A SUGAR MOIETY LABELED NUCLEOTIDE, AND AN OLIGO- OR POLYNUCLEOTIDE, AND OTHER COMPOSITIONS COMPRISING SUCH SUGAR MOIETY LABELED NUCLEOTIDES

Abstract of the Disclosure

The present invention provides a nucleotide having the formula,



wherein PM is a phosphate moiety, SM is a ribose or a deoxyribose sugar moiety, and BASE is a pyrimidine, purine or 7-deazapurine moiety. PM is attached to SM at a position independently selected from the 2', 3', and 5' positions of SM when the nucleotide is a ribonucleotide, and at a position independently selected from the 3' and 5' positions when the nucleotide is a deoxyribonucleotide. BASE is attached to the 1' position of SM from the N¹ position when BASE is a pyrimidine, or the N⁹ position when BASE is a purine or 7-deazapurine. Sig is a detectable moiety covalently attached to SM directly or through a linkage group. Also provided are an oligo- or polynucleotide comprising at least one such sugar moiety labeled nucleotide, and other compositions including those wherein a polypeptide is terminal ligated or attached to the oligo- or polynucleotide. The sugar moiety labeled nucleotide, and the oligo- or polynucleotides and other compositions comprising such nucleotides, are useful as diagnostic tools for detecting analytes and as therapeutic agents.